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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,591	04/15/2004	Norman M. Ladouceur	T8468170US	6635

26912 7590 05/13/2009

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EXAMINER	
SITTA, GRANT	
ART UNIT	PAPER NUMBER
2629	
MAIL DATE	DELIVERY MODE
05/13/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/824,591	LADOUCEUR ET AL.	
	Examiner	Art Unit	
	GRANT D. SITTA	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/19/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-6, 8, 10, 12-20, 22, 24, 26-34, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg (WO 99/49443), hereinafter Rosenberg in view of Keyson et al (5,784,052) hereinafter, Keyson.

4. In regards to claim 1, Rosenberg discloses the limitations of a handheld electronic device comprising: a scrollwheel (fig. 1 (16)) for providing input to the handheld electronic device (fig. 1 (12));

a dynamic feedback module connected (fig 2 98,112,114,115) to the scrollwheel for providing a plurality of types of feedback to a (fig 13a-c (270))

user of the handheld electronic device (pg 21 first paragraph and page 26 lines 3-29) in response to rotational motion of the scrollwheel (pg 21, line 20 variety of force sensations), each type of feedback associated with at least one of a plurality of feedback modes (pg 21 first paragraph and page 26 lines 3-29, force denent, spring force, jolt, vibration, etc); and the dynamic feedback module comprising:

means for resisting rotational motion (page 16, line 19-20 and page 22, line 1) of the scrollwheel, the plurality of types (pg 21-26 describe various feedbacks) of feedback comprising resistance (pg 26, lines 15-35) to rotation of the scrollwheel and movement of the scrollwheel in direction toward or away from the user (pg 26, lines 15-35)

a software module (page 11) for selecting a feedback mode from the plurality of feedback modes and activating the associated type of feedback (page 12, lines 1-6) provided by the dynamic feedback module (pg 21, line 20 variety of force sensations).

Rosenberg differs from the claimed invention in that Rosenberg does not *explicitly* disclose and means for providing lateral motion of the scrollwheel. Examiner notes that Rosenberg does teach a force "bump" at page 16 line 12, jolts pg 27, lines 1-7, vibrations pg 27, .

However, Keyson explicitly teaches a system and method for means for providing lateral motion of the scrollwheel (fig. 1 (112) col. 3, lines 18-43 and col. 5, lines 1-60 of Keyson).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg to include the use of means for providing lateral motion of the scrollwheel as taught by Keyson in order to communicate with an input device in an ergonomic way and to substantially broaden the scope of applicability of an input device as stated in (col. 1, lines 20-47 of Keyson).

5. In regards to claim 15, Rosenberg teaches a dynamic feedback system for use with a handheld electronic device(fig. 1 (12)); the dynamic feedback system comprising:

a scrollwheel (fig. 1 (16)) for providing input to the handheld electronic device(fig. 1 (12));

a dynamic feedback module (fig 2 98,112,114,115))) connected to the scrollwheel (fig. 1 (16)) for providing a plurality of types of feedback to a user of the handheld electronic device (fig. 1 (12)) in response to rotational motion of the scrollwheel (pg 21, line 20 variety of force sensations), each type of feedback associated with at least one of a plurality of feedback modes (pg 21, line 20 variety of force sensations), the dynamic feedback module comprising:

means for resisting rotational motion (page 16, line 19-20 and page 22, line 1) of the scrollwheel, the plurality of types of feedback comprising resistance to rotation of the scrollwheel and movement of the scrollwheel in direction toward or away from the user (pg 26, lines 15-35)

a software module (page 11) for selecting a feedback mode from the plurality of feedback modes (page 12, lines 1-6) and activating the associated type of feedback provided by the dynamic feedback module (fig 13a-c (270)).

Rosenberg differs from the claimed invention in that Rosenberg does not *explicitly* disclose and means for providing lateral motion of the scrollwheel. Examiner notes that Rosenberg does teach a force "bump" page 16 line 12.

However, Keyson teaches a system and method for means for providing lateral motion of the scrollwheel (fig. 1 (112) col. 3, lines 18-43 and col. 5, lines 1-60 of Keyson).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg to include the use of means for providing lateral motion of the scrollwheel as taught by Keyson in order to communicate with an input device in an ergonomic way and to substantially broaden the scope of applicability of an input device as stated in (col. 1, lines 20-47 of Keyson).

6. In regards to claim 27, Rosenberg method for providing feedback (page 12) on a handheld electronic device (fig. 1 (12)) having a scrollwheel (fig. 1 (16)) and having a dynamic feedback module (page 11, lines 22-37) connected to the scrollwheel for providing a plurality (page 16, lines 1-37) of types of feedback to a user of the handheld electronic device, the dynamic feedback module comprising means for resisting rotational motion of the scrollwheel (pg 27, lines 17-20, pg 24, lines 2—25):

the method comprising the steps of:

providing a user initiated input to the handheld electronic device through rotational motion of (pg 21, line 20 variety of force sensations) of the scrollwheel (fig. 1 (16));

analyzing data associated with the user initiated input (page 12);

deciding if a feedback response is required (page 4-6); and if a feedback response is required, initiating an appropriate feedback mode (page 4-6) that provides as feedback movement of the scrollwheel in a direction toward or away from the user (pg 26, lines 15-35).

Rosenberg differs from the claimed invention in that Rosenberg does not *explicitly* disclose and means for providing lateral motion of the scrollwheel. Examiner notes that Rosenberg does teach a force "bump" on page 16 line 12.

However, Keyson teaches a system and method for means for providing lateral motion of the scrollwheel (fig. 1 (112) col. 3, lines 18-43 and col. 5, lines 1-60 of Keyson).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg to include the use of means for providing lateral motion of the scrollwheel as taught by Keyson in order to communicate with an input device in an ergonomic way and to substantially broaden the scope of applicability of an input device as stated in (col. 1, lines 20-47 of Keyson).

7. In regards to claim 2, Rosenberg teaches wherein the software module selects the feedback (page 12 "For example, the computer system may provide force feedback commands to the wheel when the user moves the graphical object against a generated surface such as an edge of a window, a virtual wall, etc.") mode based on feedback data associated with a data page on the handheld electronic device (pages 11-12, and 35 and fig. 11).

8. In regards to claims 3, 17, and 30, Rosenberg differs from the claimed invention in that Rosenberg does not explicitly disclose wherein the software module selects the feedback mode based on a set of predetermined criteria.

However, Keyson teaches a system and method for wherein the software module selects the feedback mode based on a set of predetermined criteria (col. 2, lines 55-63 of Keyson "Preferably, the tactile feedback means is user-programmable so that the user can select a desired magnitude of the intensity or of another characteristic of the tactile feedback. The user is enabled, for example, by the software application run on the system to set the values of desired parameters that determine the tactile feedback.").

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg to include the use of means for selecting a feedback mode based on a set of predetermined criteria as taught by Keyson in order to communicate with an input device in an ergonomic way and to

substantially broaden the scope of applicability of an input device as stated in (col. 1, lines 20-47 of Keyson).

9. In regards to claims 4, 18, and 31 Rosenberg as modified by Keyson teaches wherein the predetermined criteria are based on preferences selected by the user (col. 2, lines 55-63 Keyson).

10. In regards to claims 5, 19, and 32 Rosenberg as modified by Keyson wherein the predetermined criteria are established in a software algorithm. (col. 2, lines 55-63 and col. 4, lines 43-57 Keyson). Examiner notes that software programs must use algorithms to compute data.

11. In regards to claims 6, 20, and 33, Rosenberg as modified by Keyson teaches wherein the predetermined criteria are based on a position of a cursor controlled by the scrollwheel (col. 2, lines 55-63 and col. 4, lines 43-57 Keyson "Other software applications may benefit from the invention as well. For example, tests demonstrate that cursor positioning times and positioning inaccuracies are reduced significantly using tactile feedback in addition to the conventional visual feedback").

12. In regards to claims 8 and 22 Rosenberg teaches wherein the means for resisting rotational motion of the scrollwheel comprises an electromagnetic motor (page 21, lines 1-35 and page 16, lines 19-25 and fig. 17 lines 27

"electromechanical system" Rosenberg). Examiner notes that Keyson also teaches using an electrical D.C. motor. (col. 5, lines 30-47).

13. In regards to claims 10 and 24, Rosenberg as modified Keyson teaches wherein the dynamic feedback module provides as feedback lateral motion of the scrollwheel away from the user when the user is able to enter data (fig. 1 (112) col. 3, lines 18-43 and col. 5, lines 1-60 of Keyson).

14. In regards to claims 12 and 26, Rosenberg as modified by Keyson teaches wherein the means for providing lateral motion of the scrollwheel comprises an electromechanical switch (fig. 1 122 col. 5, lines 30-47 Keyson).

15. In regards to claims 16, 28, and 29, Rosenberg teaches wherein the software module selects the feedback mode based on feedback data associated with a data page on the handheld electronic device (page 20 lines 19-30 and fig. 4 (72) Rosenberg). Examiner notes that the host system must access data pages stored in RAM to know the appropriate feedback.

16. Claim 34 is rejected for the same reasoning as claim 3.

17. In regards to claim 36, Rosenberg as modified by Keyson teaches wherein the lateral movement of the scrollwheel is in a direction toward the user when the user is able to enter data (col. 5, lines 13-47 Keyson).

18. In regards to claim 37, Rosenberg as modified by Keyson teaches wherein the lateral movement of the scrollwheel is in a direction away from the user when the user is able to enter data (col. 5, lines 30-64 of Keyson).

19. In regards to claim 38, Rosenberg teaches wherein the type of feedback comprises a resistance to rotational movement of the scrollwheel (page 4-6, lines 4-31 Rosenberg).

20. In regards to claim 39, Rosenberg teaches wherein the resistance to rotational movement of the scrollwheel is absolute, and the scrollwheel cannot rotate (page 4-6, lines 4-31 and pages 21-29 lines 3-3 Rosenberg)

21. Claims 7, 21 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg, in view of Keyson and further in view of Martin et al (6,563,487), hereinafter, Martin.

22. In regards to claims 7 ,21 and 35, Rosenberg and Keyson fail to disclose the limitations of wherein the dynamic feedback module provides the user with different feedback responses for different priority levels of data.

However, Martin teaches a system and method for wherein the dynamic feedback module provides the user with different feedback responses for different priority levels of data (col. 8-9, lines 50-11, of Martin "The force sensation can be varied to signify different events of the same type. For example, vibrations of different frequency can each be used to differentiate different events or different characteristics of events, such as particular users sending email, the priority of an event.").

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg and Keyson to include the use of different priority levels as taught by Martin in order to order events according to importance as stated in (col. 8-9, lines 50-11 of Martin).

23. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg and Keyson, in view of Goren et. al (7,190,351) hereinafter, Goren.

24. In regards to claim 13, Rosenberg and Keyson fail to disclose the limitations of the device comprising a keyboard.

However, Goren teaches a system and method for a device comprising a keyboard (fig. 5 (140-144) col. 4, lines 1-47 of Goren).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg and Keyson to include the use of keyboard as taught by Goren in order to also type keys into the device and to allow for an input means that is easy to learn as stated in (col. 1, lines 30-51 of Goren).

25. In regards to claim 14, Rosenberg and Keyson fail to disclose the limitations of the device comprising a touchscreen.

However, Goren teaches a system and method for a device comprising a tocuhscreen (fig. 9, lines 18-47 fig. 1 (110,119) of Goren).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg and Keyson to include the use of touchscreen as taught by Goren in order to also type keys into the device and to allow for an input means that is easy to learn as stated in (col. 1, lines 30-51 of Goren).

26. Claims 9, 11, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg and Keyson and further in view of Shahoian et al (6,693, 622) hereinafter Shahoian.

27. In regards to claims 9 and 23, Rosenberg and Keyson differ from the claimed invention in that Rosenberg and Keyson do not explicitly disclose

wherein the means for resisting rotational motion of the scrollwheel comprises at least one mechanical clutch plate.

However, Shahoian teaches a system and method for using at least one mechanical clutch (col. 18, lines 25-34 of Shahoian).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg and Keyson to include the means for resisting rotational motion of the scrollwheel comprises at least one mechanical clutch plate as taught by Shahoian in order to provide a means of varying the vibrations magnitude by means of stopping the motor as stated in (col. 18, lines 23-34 of Shahoian).

28. In regards to claims 11 and 25, Rosenberg and Keyson differ from the claimed invention in that Rosenberg and Keyson do not explicitly disclose wherein the means for providing lateral motion of the scrollwheel comprises a cam mechanism.

However, Shahoian teaches a system and method for using a cam mechanism (fig. 12 342, 346 and 350 col. 18, lines 1-34).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg and Keyson to include the wherein the means for providing lateral motion of the scrollwheel comprises a cam mechanism as taught by Shahoian in order to provide a means of varying the vibrations magnitude by means of stopping the motor as stated in (col. 18, lines 1-34 of Shahoian).

Response to Arguments

29. Applicant's arguments filed 3/26/2009 have been fully considered but they are not persuasive.

30. In response to Applicant's remarks, that the prior art of record fails to teach lateral motion of the scrollwhell in response to a rotational motion of the scrollwheel (Remarks, pg 9 2-3¶) Examiner respectfully disagrees.

Examiner notes that Rosenberg teaches a rotary wheel which provides force feedback. The feedback can include force detents (pg 24, line 26), spring force (pg 26, line 15), jolt or pop force sensation (pg 26, lines 34-37), vibration (pg 27, line 7), all of which is applied in response to a rotational motion of the scrollwheel. While Rosenberg does not expressly say lateral motion, Keyson teaches a means to apply lateral motion. Therefore, Rosenberg in view of Keyson would have provided one skilled in the art with the subject matter of the current claim limitations, i.e. to provide a jolt with lateral motion or to apply a vibration with lateral motion or to apply a pop with lateral motion, so that the lateral feedback of the scrollwheel is applied even though the user is applying a rotational force to the scrollwheel. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Rosenberg to include the use of means for providing lateral motion of the scrollwheel as taught by Keyson in order to communicate with an input device in an ergonomic way and to substantially broaden the scope of applicability of an input device as stated in (col. 1, lines 20-47 of Keyson).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GRANT D. SITTA whose telephone number is (571)270-1542. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629

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Examiner, Art Unit 2629
April 15, 2009